

***LineUp With Math™* Alignment**
Mathematics Content Standards and
Performance Standards (Grade Level Expectations) [PSGLEs]
Fourth Edition – March 2006

Content Standard A: Mathematical Facts, Concepts, Principles, and Theories

Content Strand: Measurement

Measurement Techniques

PSGLE

The student demonstrates ability to use measurement techniques by

[6] MEA-4 calculating elapsed time (minutes, hours) (M2.2.5)

***LineUp With Math™* Activities**

--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

Content Strand: Estimation and Computation

Estimation:

PSGLE

The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by

[6] E&C-1 identifying or using [a variety of **L**] strategies (e.g., truncating, rounding to compatible numbers) to estimate the results of addition, subtraction or multiplication from thousandths to millions or simple division (M3.2.1)

***LineUp With Math™* Activities**

--Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Content Standards B, C, D, and E: Process Skills and Abilities

Content Strand: Problem Solving

PSGLE

The student demonstrates an ability to problem solve by

[6] PS-1 selecting, modifying, and applying appropriate problem-solving strategies (e.g., graphing, Venn diagrams, tables, lists, working backwards, guess and check, or extending a pattern) and verifying results (M7.2.2, M7.3.2)

***LineUp With Math™* Activities**

--Choose and apply a variety of strategies to optimize the solution of air traffic control conflicts.

[6] PS-2 evaluating and interpreting solutions to problems (M7.3.3)

--Predict and plot the relative motion of two or more airplanes on given paths.

Content Strand: Communication

PSGLE

The student communicates his or her mathematical thinking by

[6] PS-3 representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or using appropriate vocabulary, symbols, and technology to explain mathematical solutions (M8.2.1, M8.2.2, & M8.2.3)

LineUp With Math™ Activities

--Predict and plot the relative motion of two or more airplanes on given paths.

--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

Content Strand: Reasoning

PSGLE

The student demonstrates an ability to use logic and reason by

[6] PS-4 using informal deductive reasoning in concrete contexts; or justifying answers and mathematical strategies using examples (M9.3.1 & M9.3.3)

LineUp With Math™ Activities

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Content Strand: Connections

PSGLE

The student demonstrates the ability to apply mathematical skills and processes across the content strands by

[6] PS-5 using real-world contexts such as social studies, friends, school and community (M10.2.1, M10.2.2, & M10.3.2)

LineUp With Math™ Activities

--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.